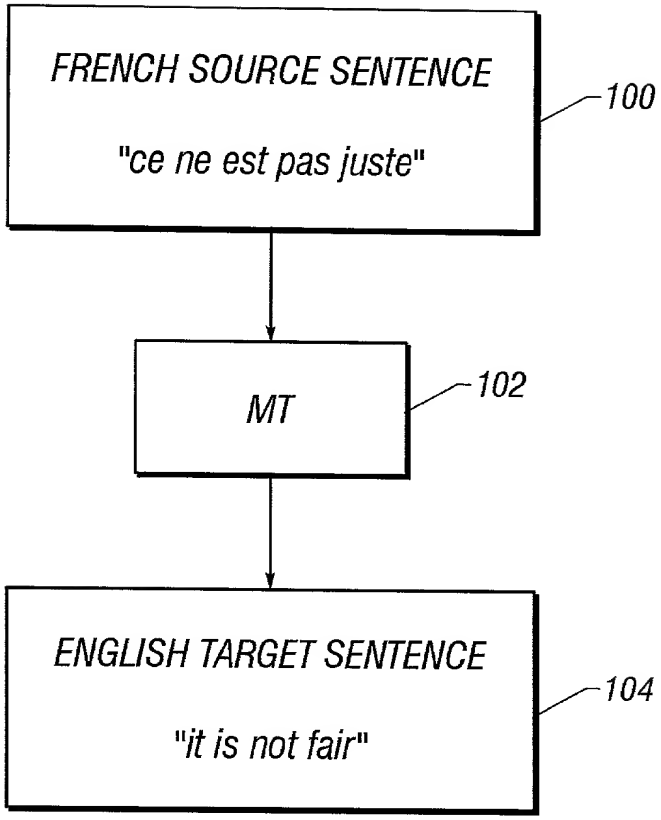
FRENCH SOURCE SENTENCE
"ce ne est pas juste"
100
MT
102
ENGLISH TARGET SENTENCE
"it is not fair"
104

FIG. 1A

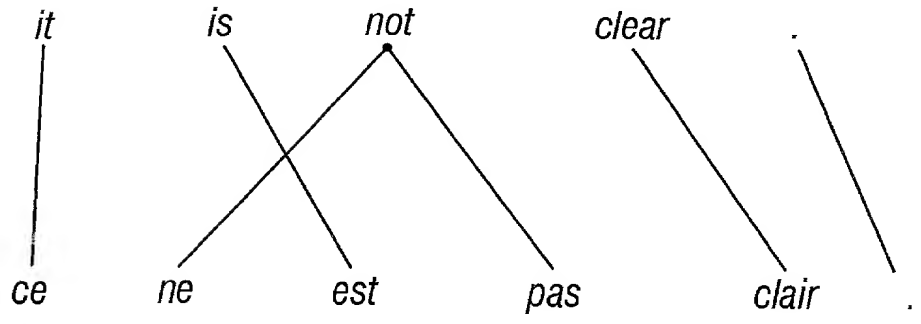
it
is
not
clear
.
ce
ne
est
pas
clair
.

FIG. 1B

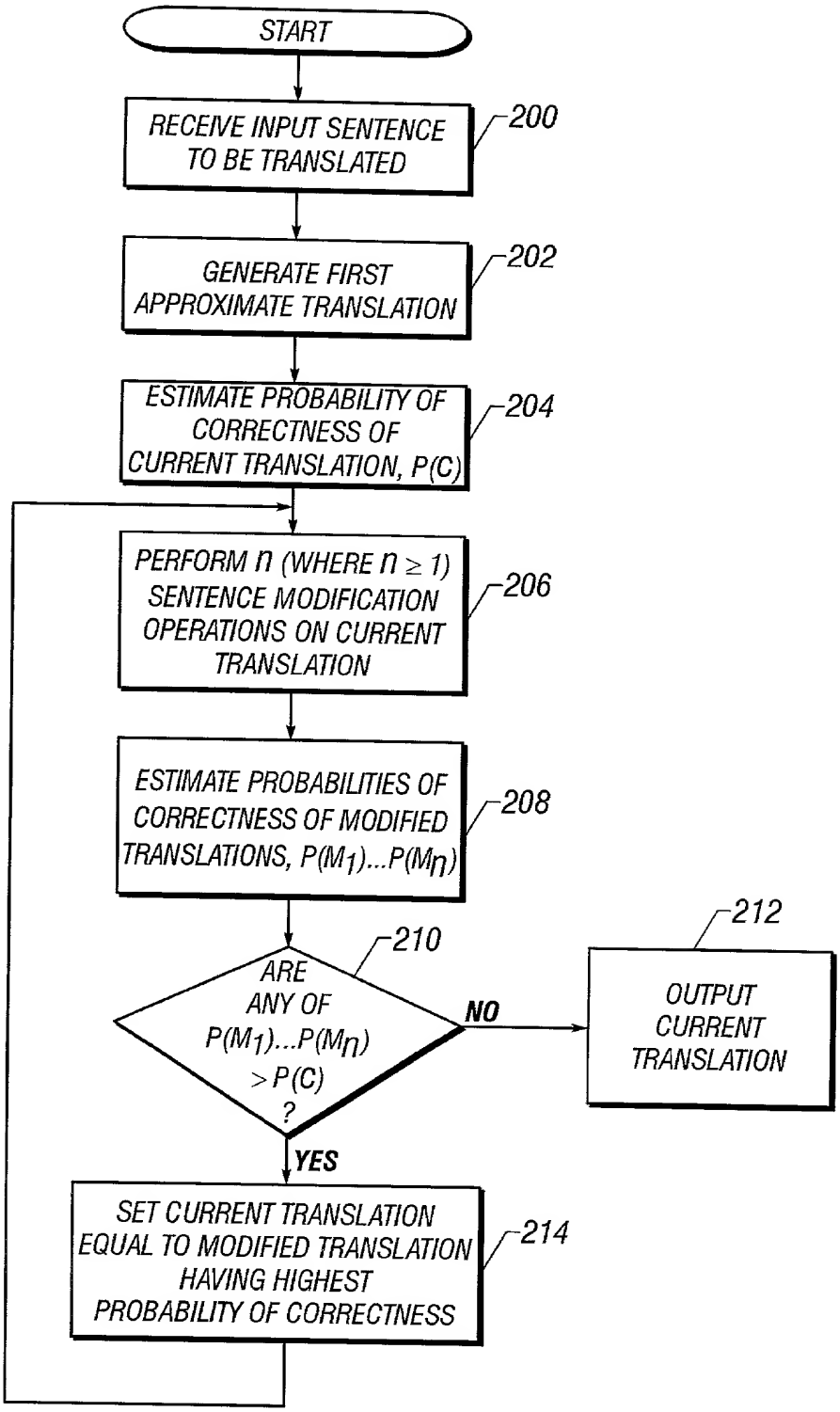

FIG. 2

Microsoft Ex. 1026, p. 2

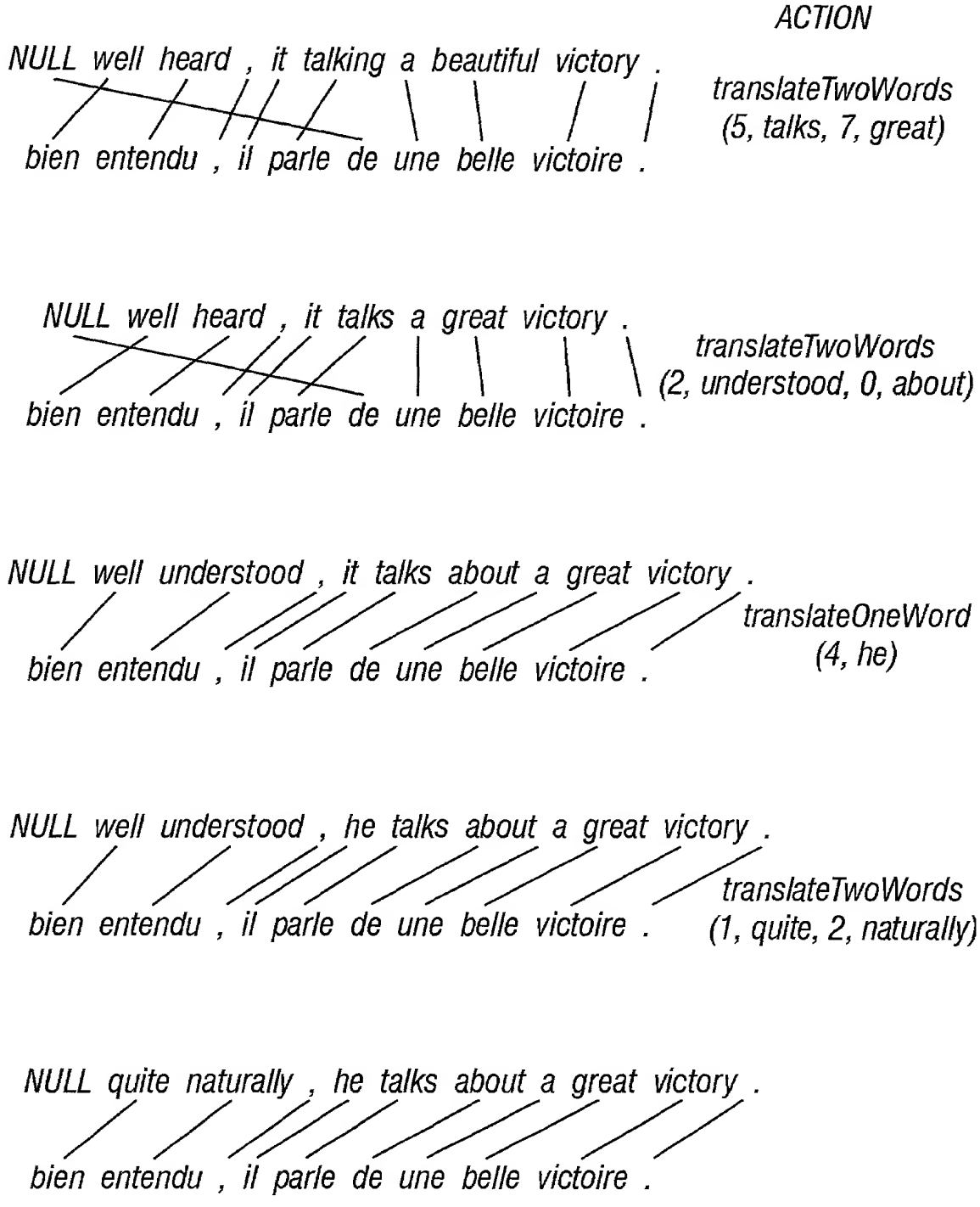

FIG. 3

Patent - 5,724,456

ITERATION 1

ce ne est pas juste.
that is not fair.
Aprob = 1.13162e-22 LMprob = 2.98457e-14 TMprob = 3.79156e-09

ITERATION 2

Change not -> ne to is -> ne

ce ne est pas juste.
that is is not fair.
Aprob = 9.95934e-19 LMprob = 8.65626e-10 TMprob = 1.15054e-09

ITERATION 3

Increase fertility. Change is -> est to is -> est

ce ne est pas juste.
that is not fair.
Aprob = 2.65104e-16 LMprob = 5.05036e-06 TMprob = 5.24921e-11

ITERATION 4

Change that -> ce to it -> ce

ce ne est pas juste.
it is not fair.
Aprob = 3.82599e-16 LMprob = 6.63863e-06 TMprob = 5.76322e-11

FIG. 4

0951+3-2 '10d5a1 '2e9d50

sent length	decoder type	time (sec/sent)	translation errors (semantic and/or syntactic)
6	stack	13.72	42
6	greedy	1.58	46
6	greedy*	0.07	46
8	stack	45.45	59
8	greedy	2.75	68
8	greedy*	0.15	69
10	stack	105.15	57
10	greedy	3.83	63
10	greedy*	0.20	68
15	stack	>2000	74
15	greedy	12.06	75
15	greedy*	1.11	75
15	greedy[1]	0.63	76
20	greedy	49.23	86
20	greedy*	11.34	93
20	greedy[1]	0.94	93

FIG. 5

Passport 22415.5

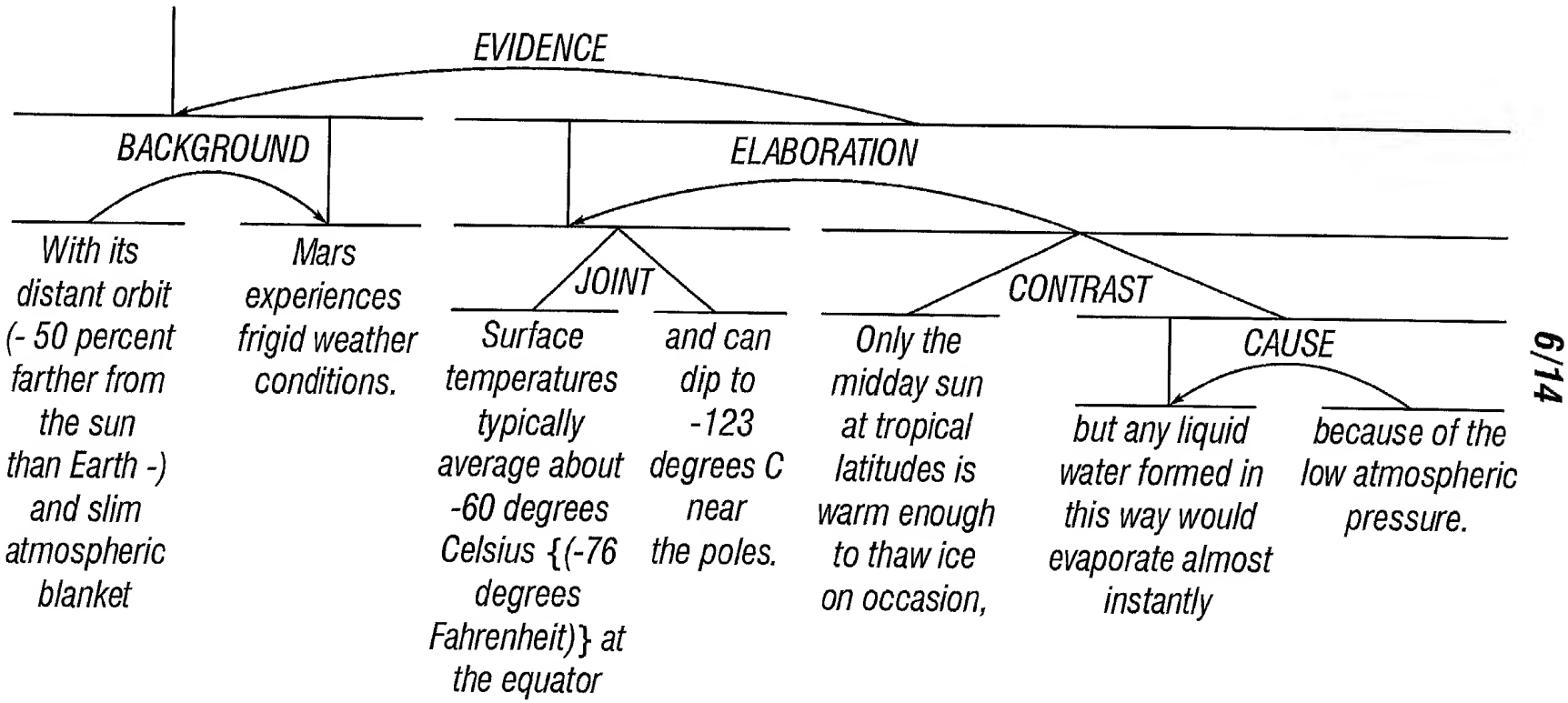
EVIDENCE
BACKGROUND
ELABORATION
With its distant orbit (- 50 percent farther from the sun than Earth -) and slim atmospheric blanket
Mars experiences frigid weather conditions.
JOINT
CONTRAST
Surface temperatures typically average about -60 degrees Celsius {(-76 degrees Fahrenheit)} at the equator
and can dip to -123 degrees C near the poles.
Only the midday sun at tropical latitudes is warm enough to thaw ice on occasion,
CAUSE
but any liquid water formed in this way would evaporate almost instantly
because of the low atmospheric pressure.

FIG. 6

[厚生省が昨年公表した[1]]
[人口の将来推計では、[2]]
[将来、一・四九九人を最低に、[3]]
[その後は上昇に転ずると[4]]
[推計していたが、[5]]
[早くも予想がはずれる[6]]
[見通しとなった。[7]]

FIG. 7

EP 0 595 479 A2

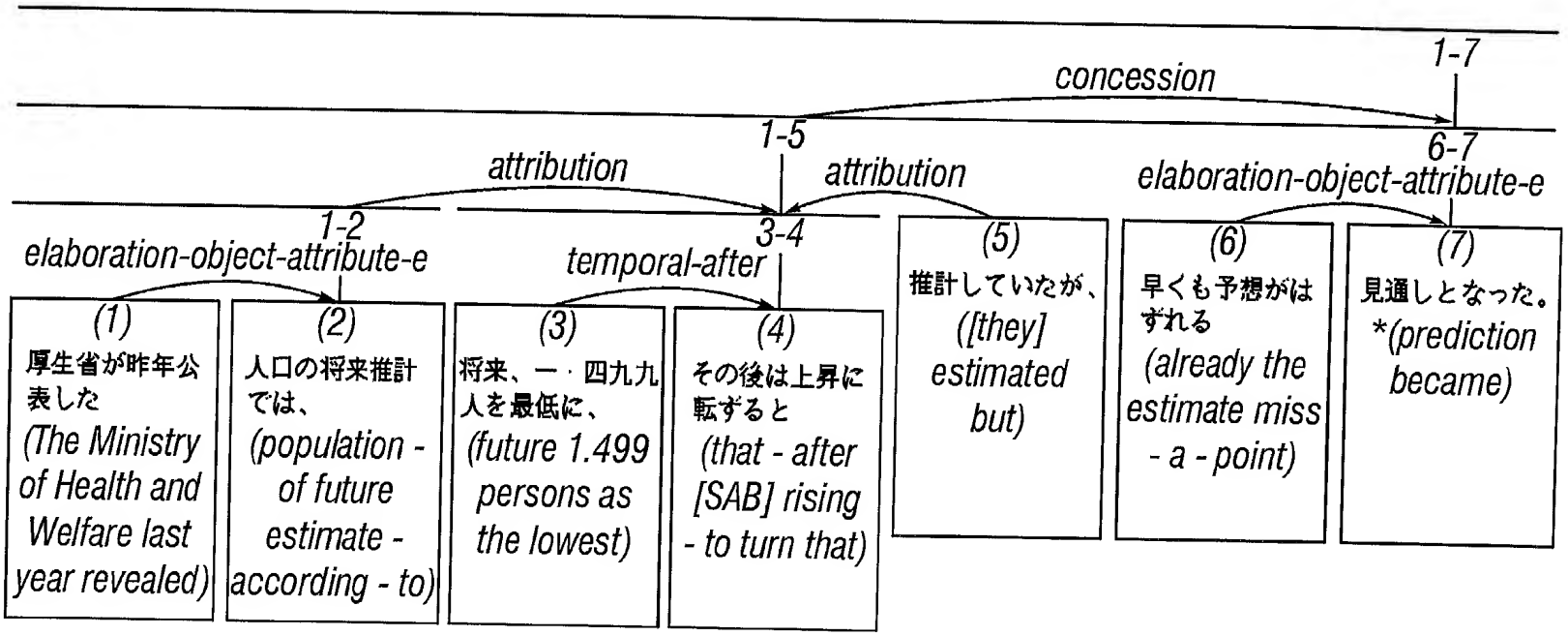
concession
1-7
1-5
6-7
attribution
attribution
elaboration-object-attribute-e
1-2
3-4
elaboration-object-attribute-e
temporal-after
(1)
厚生省が昨年公表した
(The Ministry of Health and Welfare last year revealed)
(2)
人口の将来推計では、
(population - of future estimate - according - to)
(3)
将来、一・四九九人を最低に、
(future 1.499 persons as the lowest)
(4)
その後は上昇に転ずると
(that - after [SAB] rising - to turn that)
(5)
推計していたが、
([they] estimated but)
(6)
早くも予想がはずれる
(already the estimate miss - a - point)
(7)
見通しとなった。
*(prediction became)

FIG. 8

TOSHIBA 2254860

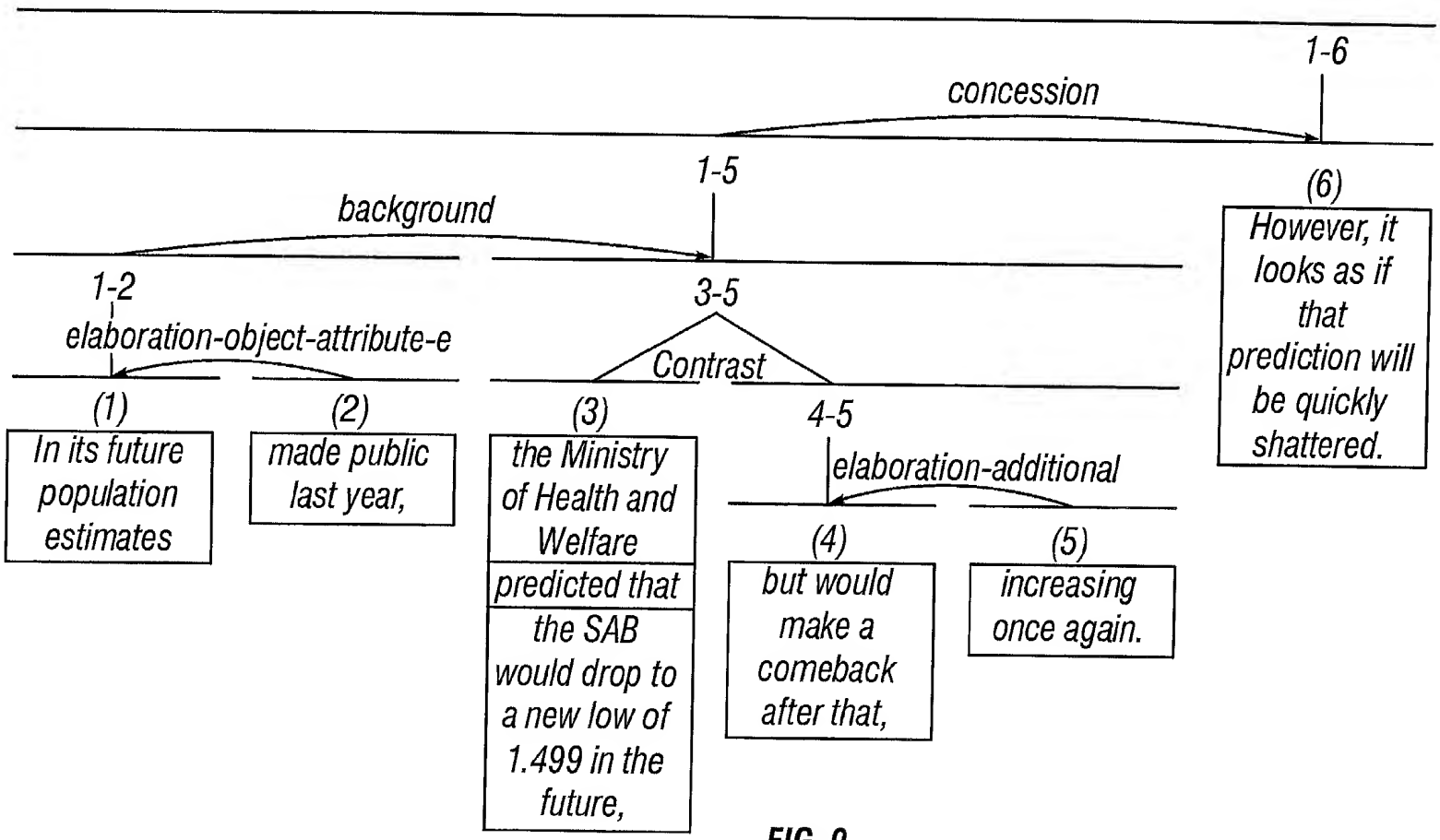

FIG. 9

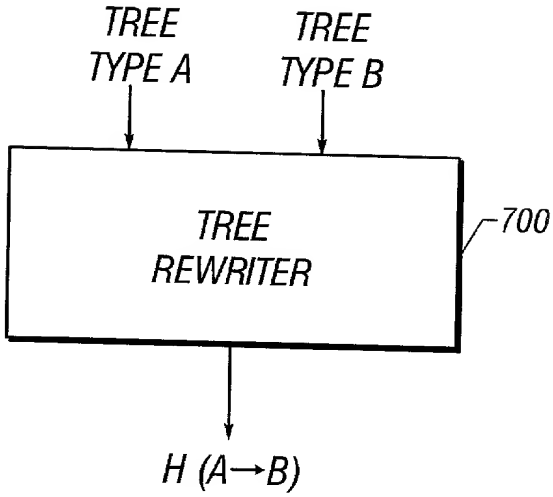
TREE
TYPE A
TREE
TYPE B
TREE
REWRITER
700
H (A→B)

FIG. 10

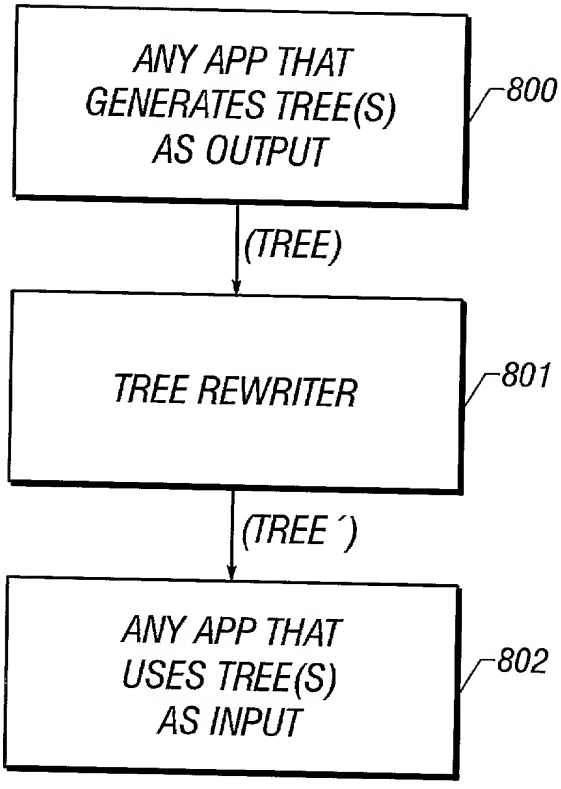
ANY APP THAT
GENERATES TREE(S)
AS OUTPUT
800
(TREE)
TREE REWRITER
801
(TREE´)
ANY APP THAT
USES TREE(S)
AS INPUT
802

FIG. 11

TO600T "225h5860

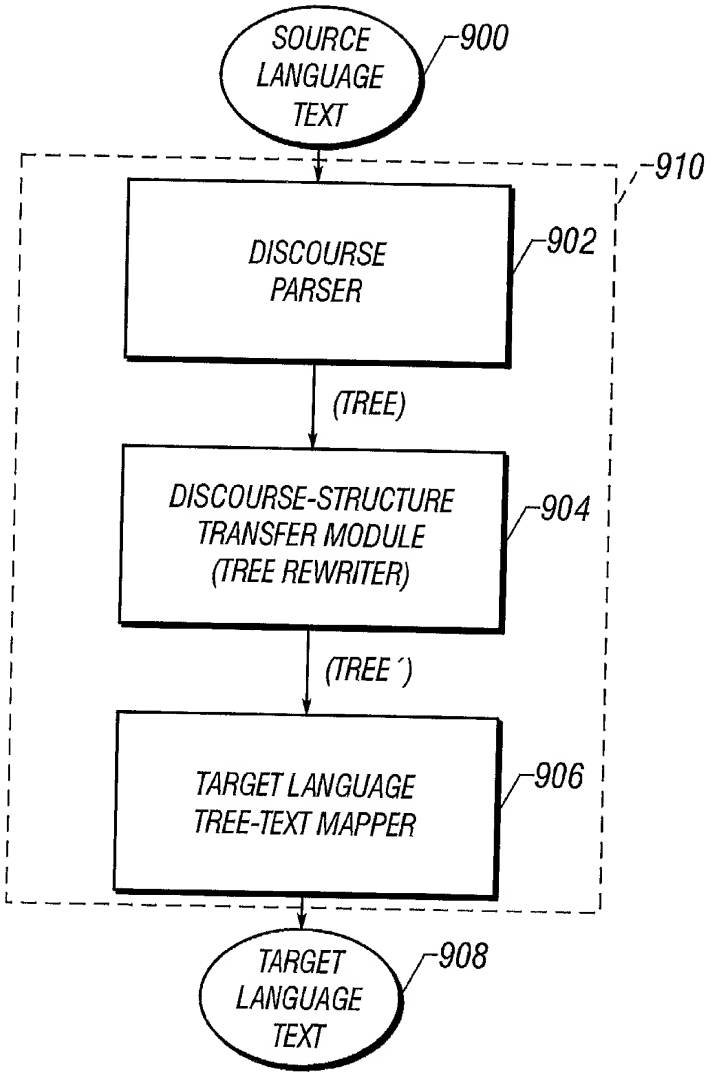

FIG. 12

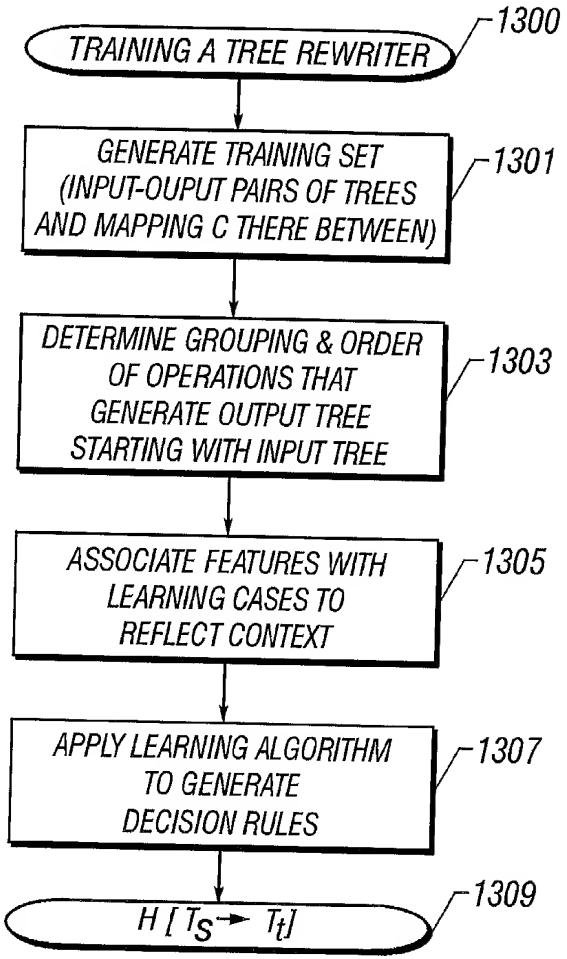

FIG. 13

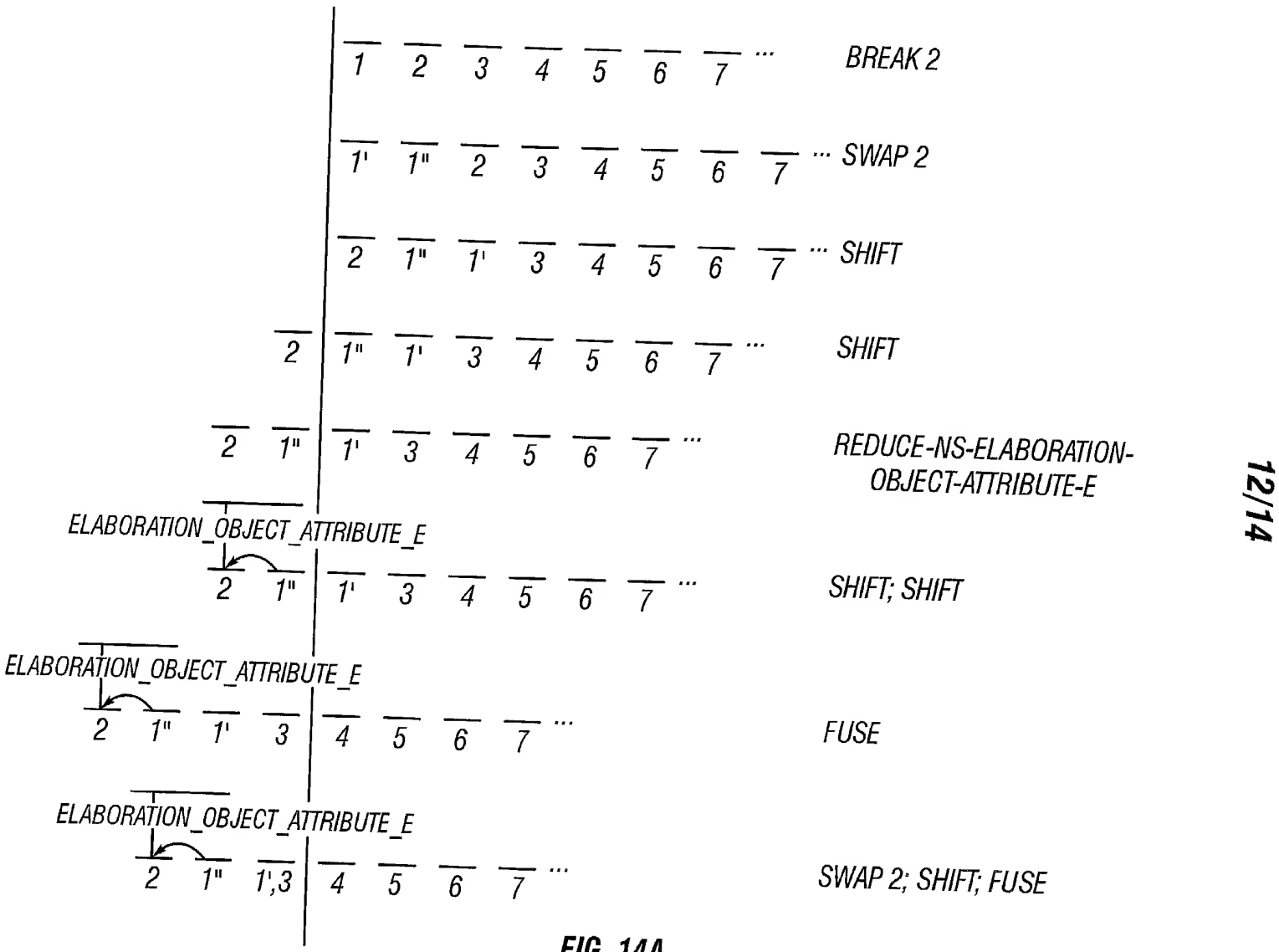
1 2 3 4 5 6 7 ... BREAK 2
1' 1" 2 3 4 5 6 7 ... SWAP 2
2 1" 1' 3 4 5 6 7 ... SHIFT
2 1" 1' 3 4 5 6 7 ... SHIFT
2 1" 1' 3 4 5 6 7 ... REDUCE-NS-ELABORATION-OBJECT-ATTRIBUTE-E
ELABORATION_OBJECT_ATTRIBUTE_E
2 1" 1' 3 4 5 6 7 ... SHIFT; SHIFT
ELABORATION_OBJECT_ATTRIBUTE_E
2 1" 1' 3 4 5 6 7 ... FUSE
ELABORATION_OBJECT_ATTRIBUTE_E
2 1" 1',3 4 5 6 7 ... SWAP 2; SHIFT; FUSE

FIG. 14A

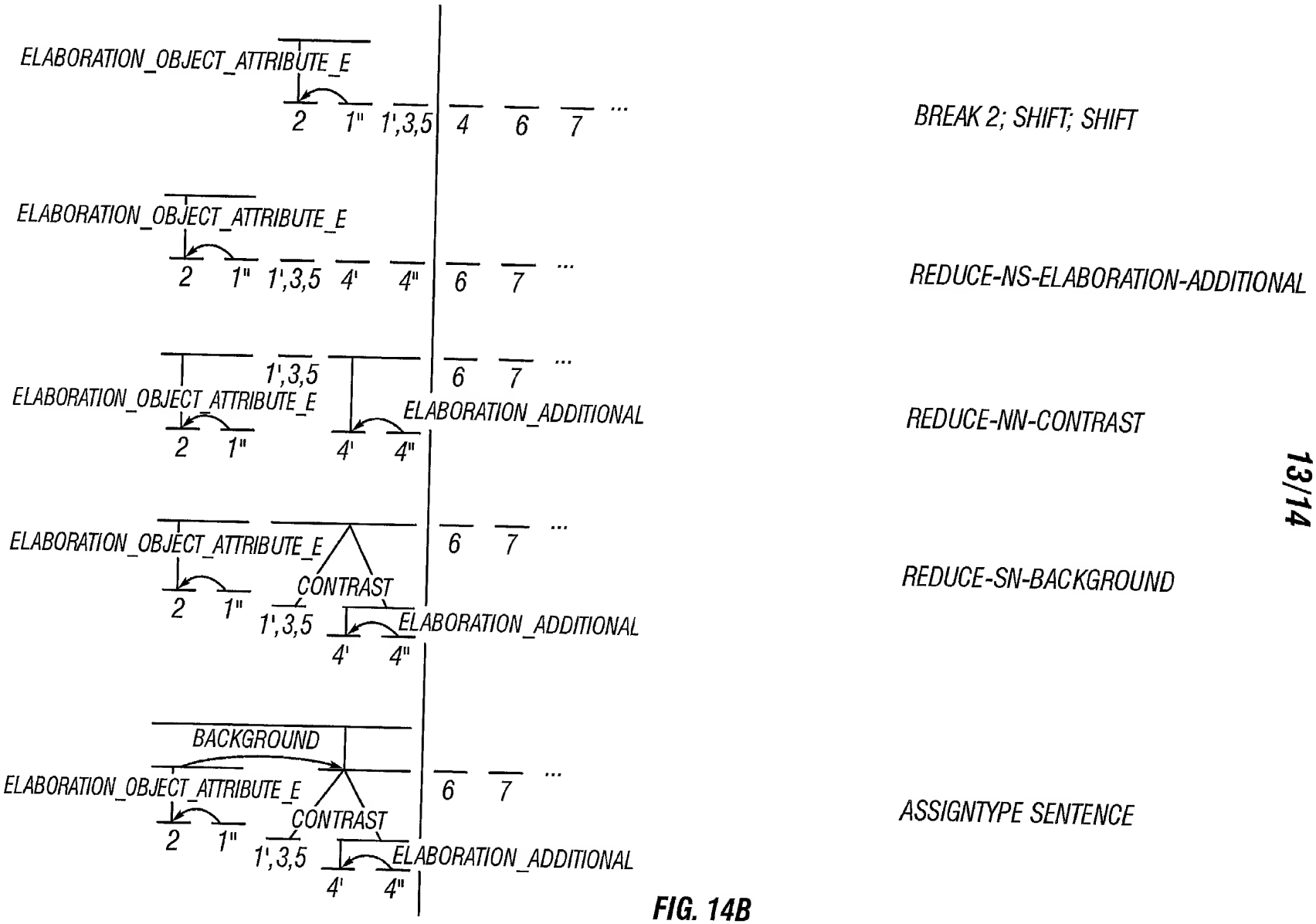
ELABORATION_OBJECT_ATTRIBUTE_E
2 1" 1',3,5 4 6 7 ...
BREAK 2; SHIFT; SHIFT
ELABORATION_OBJECT_ATTRIBUTE_E
2 1" 1',3,5 4' 4" 6 7 ...
REDUCE-NS-ELABORATION-ADDITIONAL
1',3,5 6 7 ...
ELABORATION_OBJECT_ATTRIBUTE_E
ELABORATION_ADDITIONAL
2 1" 4' 4"
REDUCE-NN-CONTRAST
ELABORATION_OBJECT_ATTRIBUTE_E
6 7 ...
CONTRAST
2 1"
1',3,5 ELABORATION_ADDITIONAL
4' 4"
REDUCE-SN-BACKGROUND
BACKGROUND
ELABORATION_OBJECT_ATTRIBUTE_E
6 7 ...
CONTRAST
2 1"
1',3,5 ELABORATION_ADDITIONAL
4' 4"
ASSIGNTYPE SENTENCE

FIG. 14B

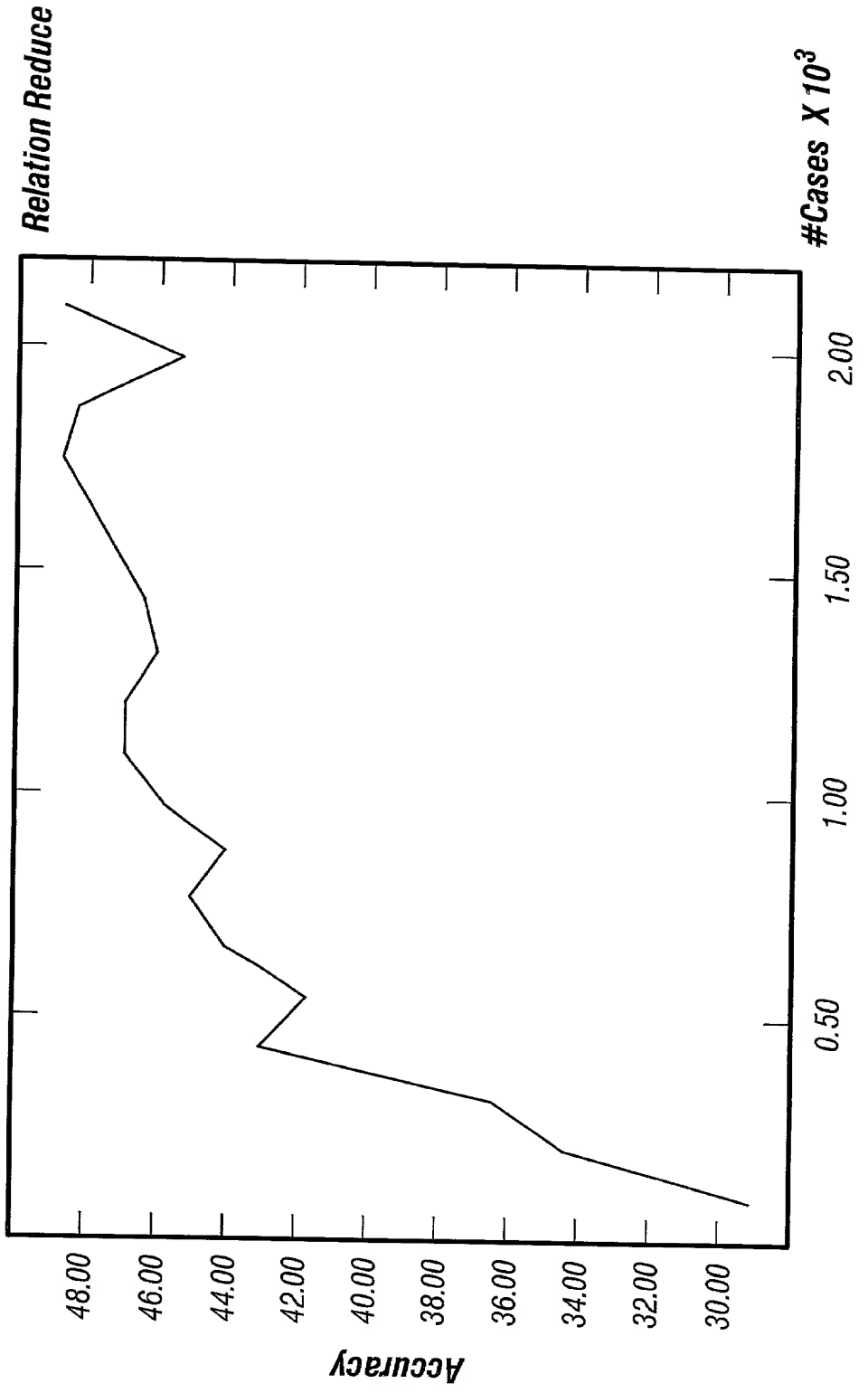
Relation Reduce
#Cases X 10^3
Accuracy
48.00
46.00
44.00
42.00
40.00
38.00
36.00
34.00
32.00
30.00
0.50
1.00
1.50
2.00

FIG. 15